# Newsletter ISSUE 12

*October - December 2025*



**Supporting Architectural and technological Network evolutions through an intelligent secureD and twinning enaBled Open eXperimentation facility.**

**ISSUE HIGHLIGHTS**

➢ **Communication and Dissemination Activities**
➢ **Upcoming Deliverables**
➢ **SNS JU News**

# INSIDE THIS ISSUE

The 12th issue of the 6G-SANDBOX Newsletter highlights the project's activities during the period October–December 2025. This issue focuses on Dissemination and Communication activities, featuring key highlights, the SNS JU Top-10 Achievements, and the 6G-Webinar. Announcements on FR3 and Deterministic Trials are also included.

**In numbers, the activities of 6G-SANDBOX during this 3 month period are:**

➢ 2 Important Announcements on 6G Trials
➢ 6G-SANDBOX Webinar
➢ 6 Presentations
➢ 1 Demo Booth
➢ 1 Workshop
➢ 1 Panel Discussion
➢ New YouTube Videos
➢ 4 Period and Upcoming Deliverables

# Communication & Dissemination Activities

## 6G-SANDBOX announced a set of large scale 6G trials

In the previous Newsletter (Issue 11), we covered the 6G-SANDBOX project announcement of a series of large-scale 6G trials planned for the first semester of 2026, focusing on Non-Terrestrial Networks (NTN) and Reconfigurable Intelligent Surfaces (RIS).

In October 2025, the project further expanded its trial roadmap by announcing two additional large-scale 6G trials, namely Deterministic Networking Trials and FR3 Trials, further strengthening the scope and ambition of the upcoming experimentation campaigns.:

The experimentations are close to a plug fest where different technologies are tested together in a meaningful **end-to-end (E2E)** system.

**Deterministic Networking Trials**

In this context, on the **21st of October**, the 6G-SANDBOX project, leveraging its current infrastructure, announced that would coordinate a large-scale trial focused on **Deterministic Networking** during the first half of 2026.

The objective is to bring together experts from companies and research centers, potentially with their solutions integrated into 6G-SANDBOX, in order to run a joint campaign of experiments addressing several key topics, including:

- TSN over 5G
- TSN components
- Tactile Internet and remote operation over 5G
- UPF for deterministic networking
- Low latency and reliability
- AI and ML-based network configuration for deterministic networking
- Protocols for deterministic networking
- Other proposals

**RIS TRIALS ANNOUNCEMENT**

In the same spirit, on the 27th of October, **6G-SANDBOX project**, announced the FR3 Trials with again with a Press Release on our social media channels and website news section.

The objectives of FR3 measurement trials are to evaluate the impact of the FR3 band oncoverage, capacity and throughput across diverse environments, including dense urban areas and rural regions. The trials will cover a range of measurement scenarios such as coverage performance, material penetration, foliage losses, rain and atmospheric losses, and coverage– capacity relationships to provide comprehensive insights into FR3 band performance under real-world conditions. A benchmarking will be done with the performance brought by using FR1 and FR2 bands.

6G-SANDBOX Links that you may are interested in: https://6g-sandbox.eu/, https://6g-sandbox.eu/engage-with-us/, https://6g-sandbox.eu/6g-sandbox-large-scale-fr3-experimentation/

Visit our website and the 'Engage with us' page or follow us online

## 6G-SANDBOX in the SNS JU Top-10 Achievements!

In November, the **Smart Networks and Services Joint Undertaking (SNS JU)** announced its 2025 Top-10 Key Achievements, a selection highlighting the most significant results from its ongoing Call 1 and Call 2 projects. These achievements span major technological developments, experimentation activities, vertical solutions and trials, impactful contributions to standards, and sustainability-driven innovations.

We are proud to share that **6G-SANDBOX** has been selected among the Top-10 Key Achievements, in recognition of our Experimentation Infrastructure as a Service (EIaaS) Toolkit.

The **EIaaS Toolkit** is an open and modular software platform that empowers a wide range of stakeholders - from startups to researchers - to remotely test and validate novel 6G concepts without the need for complex setups or costly equipment. By lowering entry barriers, it accelerates innovation and fosters collaboration across Europe's digital ecosystem.

Out of **188 achievements** submitted by **63 SNS JU projects**, we are honored that 6G-SANDBOX has been recognised as one of Europe's most impactful contributions to next-generation connectivity.

*'An online repository is available on the SNS JU website to explore each achievement in detail. By filtering results per category, sub-category or keyword, visitors can learn more about the innovative technologies and solutions and uncover further reference points for additional information.'*

Moreover, following this great announcement, on the 3rd of December, SNS JU organised a webinar entitled *'From Research to Impact: Exploring the Top-10 SNS JU Top Achievements'* giving the opportunity to the winning projects to present their achievements.

Dr. Dimitris Tsolkas from Fogus Innovations and Services P.C. partner presented the 6G-SANDBOX EIaaS Toolkit.

You may find watch the full webinar here. Find more about our Toolkit here

## 6G-SANDBOX WEBINAR:

### 6G-SANDBOX Unveiled: Project Achievements and Experimental Insights



On the 10th-11th of December, 6G-SANDBOX consortium organized a two-day webinar *'6G-SANDBOX unveiled: Project Achievement and Experimental Insights'*.  The webinar was completed successfully and brought together a strong and highly engaged audience from across the global 6G research and innovation ecosystem The webinar showcased the latest developments, platform capabilities, and experimental breakthroughs of the 6G-SANDBOX project.

**Day 1** focused on the foundations of the 6G-SANDBOX platform, introducing the trial network concept and ease of experimentation, along with a comprehensive platform overview. Participants were also introduced to the role of the Digital Twin, highlighting how virtualized representations of the network support design, validation, and optimization of advanced 6G experimentation workflows.



**Day 2** was dedicated to Experimentation Results & Technical Insights, presenting a series of in-depth technical sessions, including:

- Experimentation Results (Part A): PHY Layer and Propagation
- Experimentation Results (Part B): Programmable and Scalable O-RAN Networks
- Experimentation Results (Part C): Application-Oriented Results
- Towards 6G KPIs: Calibration and Measurement Results

These sessions showcased concrete experimental outcomes, key findings, and lessons learned from real experimentation activities, followed by an interactive Q&A session that further demonstrated the strong engagement of the audience.

Both webinar days featured interactive elements, including live poll throughout the sessions and dedicated live Q&A discussions at the end of each day. The level of engagement was exceptional, and we sincerely thank all participants for their strong presence, insightful questions, and constructive discussions.

The webinar featured expert presenters from the **6G-SANDBOX** consortium:

- Michael Dieudonne, Keysight
- Pedro Merino Gomez, University of Malaga
- Adam Flizikowski, IS-Wireless
- Bjorn Riemer, Fraunhofer FOKUS
- Dimitris Tsolkas, Fogus
- Joao Ferreira, Keysight
- Juan Torres Arjona, Nokia
- Matteo Pagin, Keysight

The event attracted more than **250 unique attendees**, representing more than **300 unique organizations**, demonstrating strong interest from academia, industry, and the wider 6G community
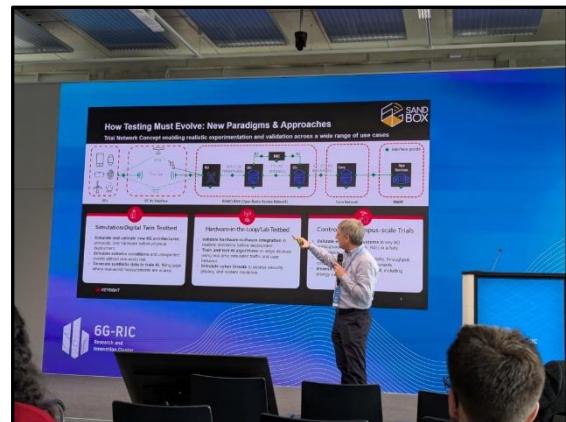
You may still register here to receive access to the recording.

## 6G-SANDBOX at 6G-RIC Project Meeting

On October 14th – 15th 2025, Giovanni D'Amore from Keysight Technologies participated in the 6G-RIC (Research and Innovation Cluster) project meeting held in Berlin.

*'The 6G-RIC initiative brings together 32 research groups from 20 universities and research institutions, supported by over 60 associate partners from academia, industry, and the public sector. This collaborative effort is funded by the German Federal Ministry of Education and Research (BMBF) under the "Souverän. Digital. Vernetzt." research program.'*



During the event, Giovanni delivered a presentation titled *'Is Wireless Layer Testing Dead? How 6G Will Change the Way We Test Networks'*. He highlighted the 6G-SANDBOX trial network as a robust framework for cross-layer, AI-driven, system-wide validation. The presentation also showcased the 6G-SANDBOX advancements in digital twin technology, artificial intelligence, and reconfigurable intelligent surfaces (RIS), along with a preview of the upcoming large-scale trials involving RIS and non-terrestrial networks (NTN).
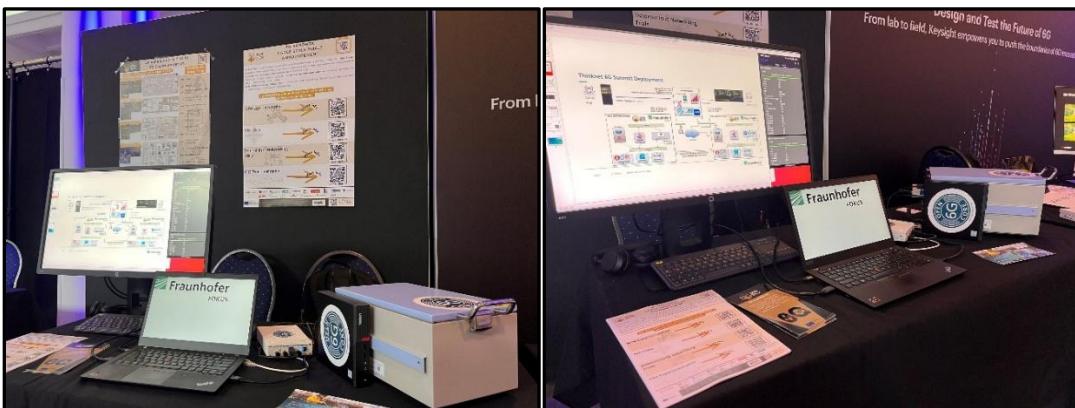
## Thinknet 6G Summit 2025

*'The Thinknet 6G Summit 2025, held on 28-29 October 2025 in Nuremberg, Germany, brought together over 200 leading voices from research, industry, politics and startup-innovation to shape the next generation of wireless connectivity. Over two intensive days, participants explored cutting-edge developments in 6G technology, as well as related fields such as micro-electronics, quantum communication and hardware-driven network architectures — all within the rich context of society's evolving connectivity needs.'*



The event was organized by Bayern Innovativ, with the 6G-SANDBOX project participating through a dedicated demo booth. The booth was supported by Project Coordinator Michael Dieudonné (Keysight), Björn Riemer (Fraunhofer FOKUS), Marc Emmelmann (Fraunhofer FOKUS), and Radu Lupoaie (Keysight). A live demo of the Trusted Network (TN) concept was showcased, featuring a local gNodeB and UE in a shield box. Additionally, ehe demonstration presented Digital Twin and RIS-related results.



Our new poster promoting the latest announcement for the upcoming 6G Trials was also featured in the booth. On the 29th, Radu Lupoaie, delivered a presentation on 6G-SANDBOX project, results and its future.



Photo Credits: **Vincent Van Duivenbode** (Bayern Innovativ)

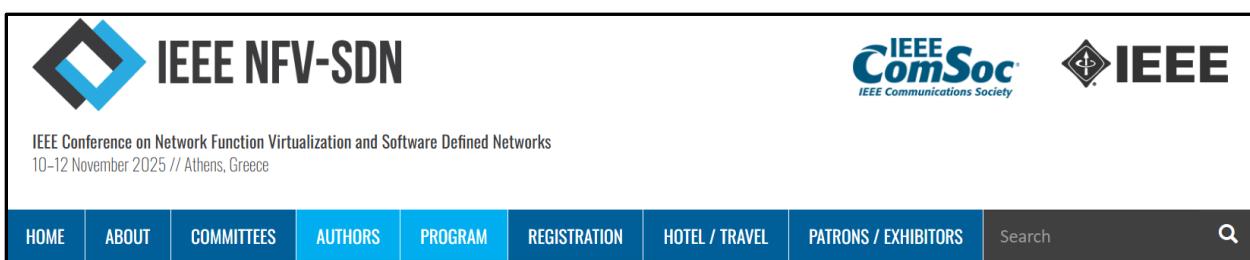## IEEE NFV-SDN 2025 and the 2nd 'ATHENA' Workshop

At the 11th IEEE Conference on Network Function Virtualization and Software Defined Networks (IEEE NFV-SDN 2025), which was held in Athens, Greece on the 10th-12th November 2025, 6G-SANDBOX project was  a technical supporter of the 2nd ATHENA Workshop, "Empowering 6G Networks: Advancements in Research Infrastructures, Adaptive Frameworks, and Global Architectural Evolution."

The workshop featured cutting-edge research, including a presentation of a paper acknowledging 6G-SANDBOX *"Prototyping an AI-Driven Cognitive Coordinator for Mapping User Intent to Trustworthiness in 6G Networks,"* highlighting innovations in AI-driven 6G network management. The paper was presented by Dr. Harilaos Koumaras (FRONT Research Group | NCSR "DEMOKRITOS")



6G-SANDBOX co-organised this workshop with leading European projects such as 6G-VERSUS, SAFE-6G, ENVELOPE, aerOS, O-CEI Horizon, 5G-TACTIC, ECO-eNET, OPTIMIST, and SOVEREIGN MSCA, reinforcing its position at the forefront of 6G research and ecosystem development.
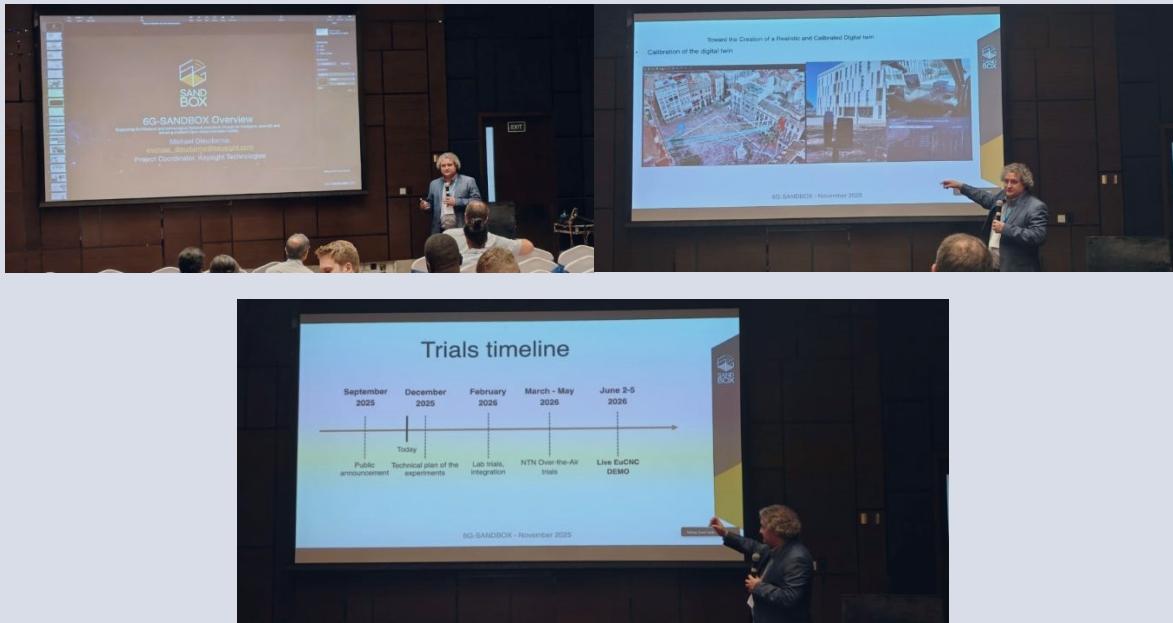
For more information about the event, you may go here.

## IEEE Future Networks World Forum

On the 10th-12th of November 2025, our Project Coordinator Michael Dieudonneé, participated in the Symposium on FN/6G Testbeds, which was held in the context of the IEEE Future Networks World Forum, at Bangalore, India. Michael delivered a presentation on 6G-SANDBOX testbeds, Digital Twins, while also promoting the project's experimentation opportunities and the upcoming Large-Scale 6G Trials.



More details about the event you may find [here](.).

## IEEE GLOBECOM 2025

From 8–12 December 2025, the 6G-SANDBOX project was present at IEEE GLOBECOM 2025.

Our Project Coordinator, Michael Dieudonné, participated in the industry panel *"IPA-14: Global 6G Testbed Collaboration for Open, Intelligent, and Interoperable Innovation"*, moderated by Li Fung Chang from Ataya. During the panel, he showcased key results from 6G-SANDBOX experimentation activities, highlighting how these experiments contribute to advancing the overall state of the art in 6G technologies. The panel also featured distinguished experts from leading international organisations:

- Constantinos Vrontos, Telco Specialist Systems and Solutions Architect, Smart Internet Lab, University of Bristol, United Kingdom
- Haibin Zhang, Senior Scientist, Netherlands Organisation for Applied Scientific Research (TNO), Netherlands
- Pi-Chen Chiu, Director, Industrial Technology Research Institute (ITRI), Taiwan

The panel focused on global collaboration among 6G testbeds, exploring how international initiatives can align architectures, methodologies, and experimentation frameworks to enable open, intelligent, and interoperable 6G innovation. Panelists discussed best practices for cross-border cooperation, shared infrastructure and data, AI-native experimentation, and the role of open platforms in accelerating research, validation, and industrial adoption of 6G technologies.



Additionally, Michael, on the 11th of December, he was one of the speakers of the Executive Forum, delivering a presentation entitled **"Next G – A Confluence of 6G & AI with the Digital Twin Bridge."** In his talk, 6G-SANDBOX was referenced as part of the experimental work that contributed to the insights presented.

Moreover, the following conference papers, acknowledging 6G-SANDBOX were presented during th following sessions

1. *Session: CISS-04: Blockchain & Distributed Systems Security I -* Somayeh Kianpisheh, Tarik Taleb, Jari Iinatti, and JaeSeung Song***, "Deep Learning based Moving Target Defence for Federated Learning against Poisoning Attack in MEC Systems with a 6G wireless Model,"*** in Proc. IEEE Globecom 2025, Taipei, Taiwan, Dec. 2025.
2. *Session: NGNI-Interactive-01: Network Security and Anomaly Detection II -* Zhao Ming, Kai Dong, and Tarik Taleb, ***"Traffic Steering based Anomaly Prevention for User Request Provision in 6G Network Slices,"*** in Proc. IEEE Globecom 2025,Taipei, Taiwan, Dec. 2025.
3. *Session: CQRM-07: Network Management -* Hamidreza Mazandarani, Mohammad Farhoudi, Masoud Shokrnezhad, and Tarik Taleb, "Adaptive Multiple Access and Service Placement for Generative Diffusion Models," in Proc. IEEE Globecom 2025, Taipei, Taiwan, Dec. 2025.

For more information on the event, you may go here.

## PRESS RELEASE by the Industrial Technology Research Institute

We are delighted to announce that the Industrial Technology Research Institute (ITRI), has successfully deployed the **6G-SANDBOX Toolkit**! "ITRI is the first deployment of the 6G-SANDBOX toolkit outside of the consortium. The technology is now ready to be spread across the globe and testbeds to support 6G experimentations," - Michael Dieudonne, 6G-SANDBOX Project Coordinator and R&D Manager at Keysight Technologies
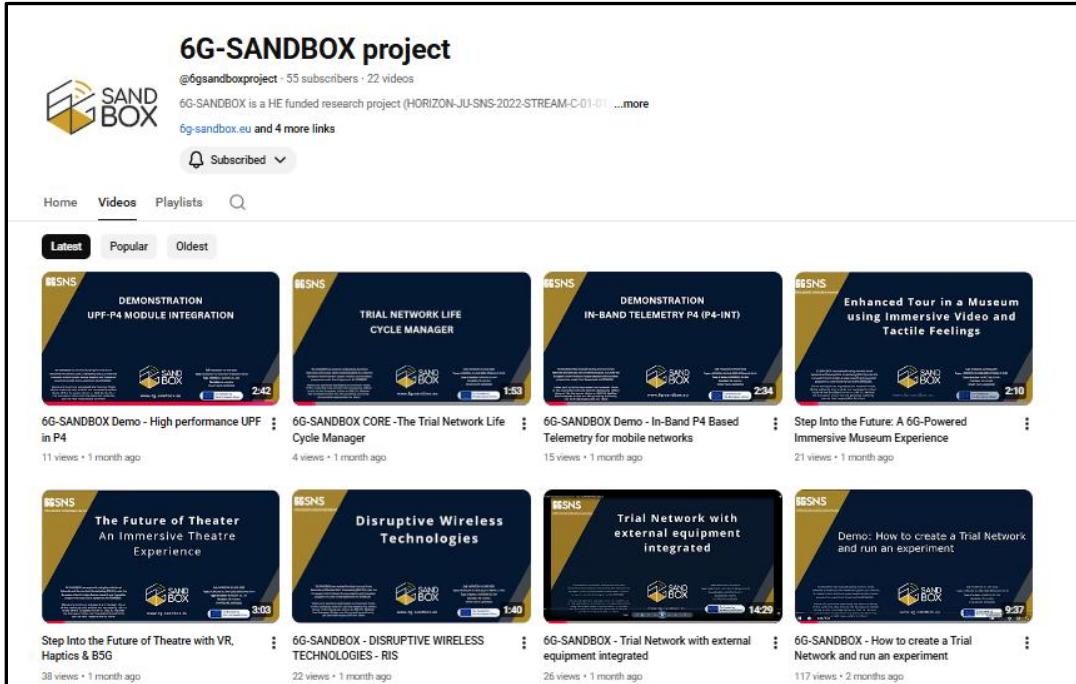
Read the full Press Release here

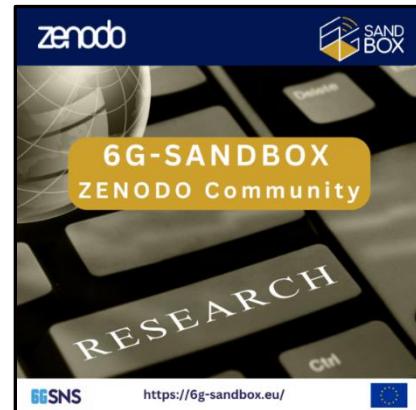# Visit our YouTube Channel!

Explore the 6G-SANDBOX YouTube channel to discover experiments, project highlights, technical tutorials, and demonstrations that showcase how our open 6G experimentation platform is advancing next generation wireless research.

**Link**: https://www.youtube.com/@6gsandboxproject/videos



# 6G-SANDBOX ZENODO Community

This is the right time to visit also the 6G-SANDBOX Zenodo Community! You may go here.

## PERIOD AND UPCOMING DELIVERABLES

**D6.3 Report on Standardization and Exploitation activities – December 2025 – Public**

**D5.5 Final report on KPI and KVI validation – December 2025 - Public**

**D6.5 Report on implementation of Open Calls – March 2026– Public**

**D6.4    Final report on Dissemination activities and SNS program collaboration – June 2026 – Public**

For more information visit our website**:** https://6g-sandbox.eu/dissemination/deliverables/

### SNS JU Insights Newsletter – Subscribe!

Have you subscribed to the SNS JU 'Insights' Newsletter yet? If not, subscribe now! Stay informed with the latest from the Smart Networks and Services Joint Undertaking (SNS JU) and Europe's journey toward 6G leadership.



## SNS JU NEWSFLASH/NEWSLETTER

- **SNS JU Newsflash (October 2025):** https://smart-networks.europa.eu/sns-ju-october-2025-newsflash/
- **SNS JU Newsflash (November 2025):** https://smart-networks.europa.eu/sns-ju-november-2025-newsflash/
- **SNS JU Newsflash (December 2025):** https://smart-networks.europa.eu/sns-ju-december-2025-newsflash/
- **SNSJU Newsletter (December 2025):** https://smart-networks.europa.eu/sns-ju-october-2025-newsletter/ **/**

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